Intermediate Experimental Psychology

GL/Psyc 3525 3.0

Professor: Josée Rivest

Assistant: Andrew Doody

Prerequisites:

Psyc 2510 6.0: Introduction to Psychology

Psyc 2520 3.0: Introduction to Experimental Psychology

Psyc 2530 3.0: Introduction to Statistics

Books:

** ** ** Rosnow & Rosenthal (2005)

Publication manual (1983) of the:
« American Psychological Association »

http://www.yorku.ca/jrivest/

Science:

- Empiricism
- Rhetoric (technical language)
- Regulative Principle
- Perceptibility
- Aesthetics
- Limitations

Scientific ways of discovery

- **Descriptive**
  - Systematic Observation
  - Genetic Studies
    - longitudinal
    - transversal
  - Ex-post facto Studies
- **Relational**
- **Experimental *******

Mode of reasoning

- **Deductive**
- **Inductive** → **Psychology**

Probabilistic Assertion

Research Cycle:

- Establish an interesting problem
- Literature review
- Prediction
- Design
- Data collection
- Data analysis
- Discussion

Situations that lead to good research ideas (McGuire)

- Intensive case study situation
- Paradoxal incident situation (Latané & Darley)
- Rule of thumb (Janis)
- Account for conflicting results
- Serendipity (Brady & Porter)

Research questions

A good research idea:

- Correspondence to reality
- Coherence et parsimony
- Falsifiability (refutability): Popper

Definition of concepts:

- Theoretical
- Operational

Four steps in order to reach a good research idea

- Initial thinking
- Plausibility
- Acceptability
- Feasibility

Hypothesis:

1. Operational
2. Rigorous
3. Theoretically appealing
4. Testable

Internal validity:
Isolation of the independent variables?

History of the artefact problem

- Horse Hans (1911; Pfungst)
- Western Electric Company
  - Hawthorne works (1924)
- Rosenweig (1933)

Participant artefacts

- Good subject effect
- Altruism
  - Evaluation apprehension
  - Obedience

Techniques to detect participant artefacts

- Quasi control group
- Pre-inquiry
- Observing DV in different contexts

Strategies to avoid participant artefacts

- Minimize the clarity of the demand (expectations)
- Generate alternate demands
- Encourage honest responses

Experimenter artefacts

- **Non interactional effects**
  - Observation and recording
  - Interpretation
  - Intention
- **Interactional effects**
  - Biosocial effects
  - Psychosocial effects
  - Situation effects
  - Researcher expectancy

Strategies to avoid experimenter artefacts

- > # of experimenters
- Observe the experimenters' behaviors
- Analyse the "experimenter" effects
- Use expectancy control groups
- Maintain "blind" contact
- Minimize experimenter-subject contact

BURNHAM (1966) Expectancy control design

	Expectancy		
Brain state	Lesioned	Unlesioned	Totals
Lesioned	46.5	49.0	95.5
Unlesioned	48.2	58.3	106.5
Totals	94.7	107.3	